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ACADEMIC STRATEGY FOR TEACHERS OF ENGINEERING TO OBTAIN A B2 ENGLISH PROFICIENCY CERTIFICATION


ESTRATEGIA ACADÉMICA DIRIGIDA A DOCENTES DE INGENIERÍA
PARA LA OBTENCIÓN DE LA CERTIFICACIÓN DE COMPETENCIA EN
INGLÉS EN EL NIVEL B2

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ABSTRACT

This paper describes an academic strategy for Mexican university teachers of engineering aiming to obtain the B2 Cambridge FCE (called First Certificate in English) certification to teach courses in this language. The strategy began with an open invitation to faculty assumed to have B1 level English but lacking FCE certification. Its goal was formative, focusing on distinguishing language knowledge from the skills for the exam. The process included an initial diagnostic test in reading, writing, listening, and speaking under non-certification conditions. Teachers identified at B1 level enrolled in a training course with exercises resembling the FCE exam, helping them assess their current level, build confidence, and adapt to exam conditions especially time constraints. The strategy also estimated candidates' potential for success in the B2 test, encouraging only those showing promise to take the certification. After applying the strategy, about 87% of participants who completed the process achieved their B2 certification, showing that training professors who had certain level of English could level it up and reach the certification mostly in the target level. The strategy described in this article could be considered by other institutions to get professors to obtain a certification worldwide recognized of their proficiency in English.

Keywords:

FCE certification,
English proficiency,
teacher training.

RESUMEN

Este artículo describe una estrategia académica dirigida a profesores universitarios de ingeniería en México, cuyo objetivo es obtener la certificación Cambridge FCE (conocido como First Certificate in English) de nivel B2 para impartir cursos en este idioma. La estrategia inició con una invitación abierta al profesorado que se presumía contaba con un nivel de inglés B1, pero carecía de la certificación FCE. Su propósito fue formativo, enfocándose en distinguir el conocimiento del idioma de las habilidades necesarias para el examen. El proceso incluyó una prueba diagnóstica inicial en lectura, escritura, comprensión auditiva y expresión oral, realizada bajo condiciones no certificatorias. Los profesores identificados con nivel B1 se inscribieron en un curso de capacitación con ejercicios similares al examen FCE, lo que les permitió conocer su nivel actual, ganar confianza y adaptarse a las condiciones del examen, especialmente el tiempo. La estrategia también estimó el potencial de éxito de los candidatos en el examen de nivel B2, alentando únicamente a aquellos con probabilidades prometedoras a obtener la certificación. Después de ejecutar la estrategia, aproximadamente el 87% de los participantes logró la certificación B2, demostrando que es posible capacitar a profesores con cierto nivel de inglés para alcanzar la certificación en el nivel requerido. La estrategia descrita en este artículo podría ser considerada por otras instituciones para lograr que los profesores obtengan una certificación reconocida mundialmente de su dominio del inglés.

Palabras clave:

certificación FCE,
competencia en inglés,
capacitación docente.

Introduction

English proficiency has gained significant importance all over the world because it has been considered as “lingua franca.” This concept refers to a language used as a means of communication among speakers who do not share a native language, primarily for reasons of neutrality in international relations (Arttime et al. 2023). Marquez and Porras (2020) mentioned that nowadays in education a great amount of knowledge and educational resources are available in English. Moreover, many of the most prestigious universities, research institutions, and academic journals worldwide publish their works in this language.

Therefore, the benefits derived from mastering another language include meaningful learning in the professional field, as access to information in a second language enables comprehensive knowledge exchange and broadens the perspectives of knowledge internationalization. It can be stated that fluency in English undeniably facilitates entry into the job market (Rodriguez, 2024). Nowadays, this language has established itself as the primary language for international business and economic activities. As the global economy’s lingua franca, it enables seamless communication across nations, allowing companies to function effectively in multicultural and multilingual contexts. It is also widely used not only in English-speaking regions but also within multinational corporations, global trade, and small enterprises aiming to broaden their presence in international markets. For professionals in fields such as finance, marketing, technology, and logistics, proficiency in English is an essential skill

for effective communication and career advancement. (Agustina et al., 2024).

Currently, engineering education program accreditation frameworks pursue the whole education approach which involves effective communication in both their native language and a foreign language (CACEI, 2018). As a result, teachers of engineering must comply with requirements that include English too. In order to attain mastery of this language, an individual must exhibit a prominent level of competency in four basic language skills: reading, listening, writing, and speaking, thus, English proficiency tests consist of evaluating these skills (Garro, 2019),

Solis and Gonzalez (2023) mentioned that in Mexico and Latin America, some universities are introducing teaching modalities where content is taught in English, but this process is still being developed through internal (home-based) strategies and processes. That is, institutions aim to enhance the international and intercultural competencies of their faculty, many of which are rooted in proficiency in English. These world tendencies towards internationalization of education, businesses and markets are important to the UANL. For this reason, the university has been working on the development of programs aligned with such tendencies. Teaching under international standards includes courses in English taught by professors holding a certificate valid worldwide. Consequently, The Facultad de Ingeniería Mecánica y Eléctrica (FIME) is interested in having professors certified in English for its engineering courses.

The Common European Framework of

Reference for Languages (CEFR) is a globally recognized standard for describing language proficiency and categorizes distinct levels of proficiency ranging from basic to advanced levels: A1, A2, B1, B2, C1, and C2 (Council of Europe, 2001). B1 is acceptable for familiar situations and topics, the speakers at this level can describe experiences, express opinions, and explain plans in simple English. Since the teachers serve as role models in the use of their language with a broad vocabulary in their expressions as in the topics they teach, it is highly advisable that they should deal with complex ideas and present them in an understandable way using standard spoken language in live or broadcast (online courses) and prepare written material properly. Their students might even learn English and proper expressions while being taught classes of engineering. Moreover, B2 is the level at which speakers possess both confidence and control over the fundamental language skills, which enable them to perform in academic and professional settings in English-speaking countries. Within this reference, it has been proposed that the faculty in charge of courses taught in English must have at least a B2 level. The strategy developed to train three groups of teachers to obtain this certification is presented in this paper.

Theoretical framework

Knowing English or having experience with it does not guarantee passing a certification exam, as participants may lack key strategies, leading to mistakes during the test. Brady (2022) posted on the International Education blog of Cambridge University Press and

Assessment that evaluating students' understanding and abilities in a subject can be difficult due to the influence of various factors. During a test, candidates may experience anxiety, leading to mistakes such as: poor time management, overlooking or skipping questions, misinterpreting or ignoring instructions, or making errors due to nervousness. The most remarkable fact is that when participants take the exam and are affected by these aspects, they could feel frustrated because they are not able to do their best and often blame their level of English rather than their skills for facing the tests.

People who want to take a certification exam without a training course are known to have certain proficiency in English that can be associated to experience using the language in real contexts. However, they could be affected when taking the test because they do not know the types of questions or exercises included. Taking a training course will give them the tools, tips, knowledge and experience to make the best decision when taking the exam. Some authors have found, from their teaching experience, that students hesitate when faced with questions whose answers seem too simple, as they believe these might be tricky questions. This might be a cultural issue to confirm, but it is not addressed in the support pages containing recommendations offered by some English certification organizations, such as Cambridge. There are no tricky questions in the exam, but it is the lack of confidence rather than knowledge that causes students to double-check or overanalyze, leading them to waste valuable time and struggle to finish each section on time. This is not just a motivational issue; the trainees must recognize

the importance of these aspects, even if they may seem trivial.

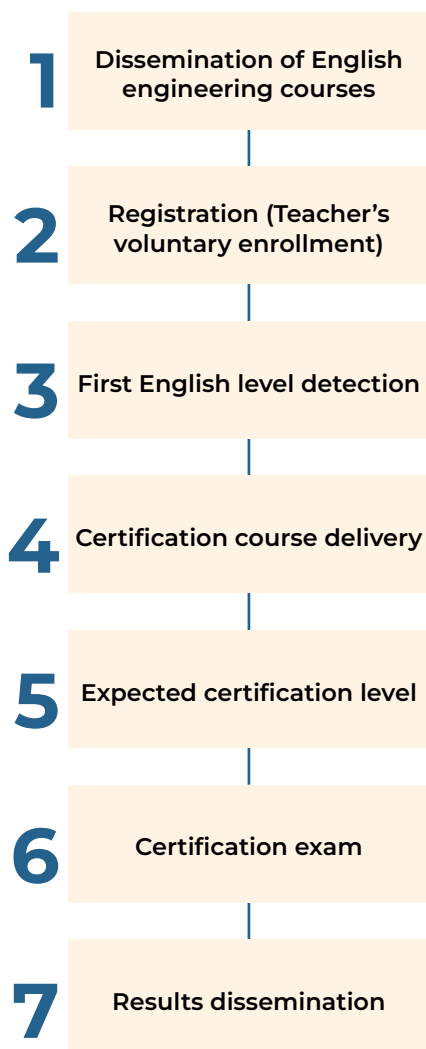
In order to provide the necessary tools to pass the certification exam, it is essential to take a training course. In this way, the candidate will acquire what is needed. Porter (1980) proposed three generic strategies that organizations can use to achieve and sustain a competitive advantage in their industry: cost leadership (a strategy to become the lowest-cost producer in the industry), differentiation (a strategy to offer unique products or services that stand out in the market), and focus or segmentation (tailors offerings to meet the specific needs of a well-defined audience). A course like the one proposed in this article matches the third strategy proposed by Porter (1980). It relates to “focus” or segmentation because it is targeted to a specific group (individuals who want to pass an English certification exam). It also offers solutions by customizing the training to address the needs, challenges, exam strategies, time management and specific test format.

The course also offers a valuable proposition, as it is focused on engineering professors who want to obtain this certification. Consequently, this training course is differentiated from general English training programs.

As a hypothesis, it was proposed to follow a strategy which addressed the challenges faced by aspirants seeking certification by promoting sustained confidence in their knowledge of English and the skills necessary to manage time effectively and answer assertively. This strategy would be effective for obtaining a certification in English proficiency

Method

The initial plan was aimed to certify current faculty who had a certain level of English by Cambridge (FCE). A diagram of the process is presented in Figure 1. The interest of the school in having courses of engineering taught in English was announced among the faculty, explaining how the proficiency of that language was measured (Step 1). The purpose of this activity was to serve as an invitation, so that the potential candidates signed in voluntarily in the strategy for certification accordingly to their own perception of their knowledge of English (Step 2). It must be noted that the strategy was addressed to the certification; therefore, it did not consist in a course of English as a foreign language, the trainees needed to have enough background to cover at least the requirements for achieving the B2 level, and for this, (Step 3) the identification of each teacher's English level was held with an exam of writing, grammar, listening and speaking, without the stressing conditions of a certification test. Although the certification course was not intended to teach English, the candidates certainly would have the chance to learn, even if they were close, but below B2. Then all the teachers identified with at least B1 level, were accepted as candidates to take the Certification preparation course.

Figure 1*Diagram of the steps followed to achieve certification.*

This strategy was intended to show how important it is to combine English as well as skills to succeed in the certification process. The accepted trainees had to be able to get the required score in the certification test dealing with the conditions related to time, space, and the test itself, thus, they followed the delivered Certification course (Step 4). The main part of the strategy was a preparation course designed to build the skills of the trainees for succeeding in their B2 Cambridge (FCE) test

by understanding the mechanics of the exam. As a result, trainees were given a series of clues for preventing common mistakes that led to failure even though they had enough background of English to achieve their certification, for example, in the reading section, being more interested in the topic presented in the text than in finding a correct answer for the question given, resulting in a waste of time reading unnecessary information that can be used to answer the rest of the questions without running out of time and in the speaking section, having the idea that fluent speaking means correctness. These mistakes are often dismissed when clear examples are provided.

The designed course for certification was delivered along sixteen online sessions of 120 minutes each, instructed by a certified teacher of English. In each one, valuable information was given to the trainees with topics that considered the types of exercises included in the exam and the best practices for answering them. The sessions and their correspondent topics were as follows:

First session

As an introduction, the trainees received information showing the different sections of the Cambridge FCE test, so they could have first contact with the structure and the types of exercises included. Throughout all the sessions, different teaching techniques were employed, such as videos describing the examples, exercises, oral presentations, analysis and discussion of the presented material so that it was understood, rather than memorized and became an asset.

Second, third and fourth sessions.

Skill: Reading and use of English.

Types of items:

- Multiple choice cloze: Underline important information, linking words that express reason, sequence of events, and contrast.
- Open cloze, text with gaps: Read the information before and after each gap in order to know the type of word that best completes it, e.g. verb, preposition, conjunction, relative clause or adverb.
- Word formation: Decide the type of word needed for each gap (verb, noun, adjective, or adverb) check if singular or plural form is required and read the whole sentence, not just at the line that contains the gap.
- Key word transformations: It is shown that paraphrasing is required (say something in other words), use synonyms, transform grammatical structures, and remember that the two sentences must be as similar as possible in meaning.
- Text with multiple choice questions: Read the text quickly to understand its general meaning; the questions given in the exercise follow the order of the text, although the last may be one referring to the main idea of the text or asking about an opinion expressed by the writer. It is important to identify the part of the text where the answer to the question is found and underline it as a reference when reviewing the answers.
- Text with missing sentences: Read all paragraphs to get the general idea and topic of

each one. Look out for time phrases, linking words, expressions, relative clauses, pronouns or synonyms that may help to comprehend the text better.

- Multiple matching: Identify what is needed: an opinion, a preference, a dislike, inspiration, business, and dream, among others. The videos represent an aid but also a challenge because trainees must understand the spoken English in different accents.

Fifth and sixth sessions.

Skill: Listening.

Types of items:

- Answering questions: The words used in the questions usually differ from what is heard. The relevant words will most likely be paraphrased. This means they are saying the same thing using different grammar, vocabulary, and words. There are many accents when it comes to English. Some accents are easier to understand than others. However, it is essential to learn how to understand all accents. When getting used to a particular accent, it may be difficult to understand when hearing an unfamiliar accent.
- Understanding gapped sentences: Awareness of distractors in the recorded clips. These distractors are put in place to make an attentive listening and focus on the recording, identify the paraphrased words, and identify the correct word or phrase.
- Multiple matching: The words used in the questions usually differ from what is heard. The relevant words will most likely be paraphrased.

This means they are saying the same thing using different grammar, vocabulary, and words

- Multiple choice questions: Be aware that there are distractors in the recorded clips.

Seventh session. Sample test: Reading and use of English section.

The trainees took a mock exam (Cambridge FCE sample test), so they could be able to apply the strategies practiced and be evaluated with a test which was like the target one. They had to answer the mock exam within the time limit set (75 minutes).

Eighth session. Sample test: Listening section.

The trainees took the mock exam (Cambridge FCE sample test), so they could be able to apply the strategies practiced and be evaluated with a test which was like the target one. They had to answer the mock within the time limit established (40 minutes).

Ninth and tenth sessions. Skill: Writing section

Essay based on prompts, article, review, email/letter or report. These kinds of writing were given with special attention to formality and coherence. These were usually written for a website, a magazine, or a newspaper. Trainees got ready to write good essays after practicing, discussing, and analyzing the information above.

Eleventh and twelfth sessions. Skill: Speaking.

Interlocutor and candidate conversation, describing items, technologies and photos, discussing and developing a topic and reaching an agreement.

Thirteenth session. Sample test writing section.

Trainees took a mock exam (Cambridge FCE sample test), so they could be able to apply the strategies practiced and be evaluated with a test which was like the target one. They had to answer the mock test in the time limit set (80 minutes).

Fourteenth and fifteenth sessions. Sample test speaking section.

Trainees took a mock exam (Cambridge FCE sample test), so they could be able to apply the strategies practiced and be evaluated with a test which was like the target one. They had to answer the mock test in the time limit set (14 minutes per pair of trainees)

Sixteenth session.

Results of the Cambridge FCE sample paper and feedback.

All parts of the mock exam were checked the same way as the real one, (considering the value or marks, evaluation criteria, and rubrics suggested for the writing and speaking sections). A statement of results was given to the trainees as well as feedback about the things that were done correctly and the areas of opportunity or problems to be solved regarding their performance in the mock exam. Each trainee was aware of the recommendations and got ready for the Cambridge FCE exam to get the score required.

During all sessions, watching and analyzing videos was a valuable tool used because these represented an aid but also a challenge. The trainees had to understand the spoken English in different accents. They also reviewed all structures, features,

tips, what to do and not to do, so they could be ready to answer the exercises the best way. After watching the videos, discussing the advice given, and reviewing everything presented, trainees answered exercises taken from the web like the ones included in the Cambridge FCE exam considering a time limit. The experience of the instructor was of great value not just in recognizing the possible mistakes of each participant but building confidence in learning the actions that must be performed during the examination to get the required score. At the end of the course, the trainees got used to answering all kinds of exercises included in the test in an efficient way, so that they did not fail due to lack of time.

It is important to mention that since this strategy was based on voluntary enrollment, it was important that besides the feedback given to the trainees along the course, they would find out their competence level and their real potential to develop the skills for getting the B2 Cambridge Certificate. A

sample certification test was applied to the trainees, so they could apply what they learned in the course. The sample test results led the organizers of this strategy to know if the trainees could get the score required in the certification test. Since the objective of the strategy was for all the teachers who succeeded in the training course to obtain at least the B2 certificate, after the trainees finished this course, they were told about the proficiency level they seemed to have. Finally, they took the real Cambridge test to get certified (Step 6) and their results, without their names, were shown in the school as a promotion for future generations (Step 7).

Results

Table 1 shows the teachers' proficiency level having taken the preparation course in the three groups; 2021, 2022 and 2023 respectively, as indicated in Step 5 (expected certification level).

Table 1

Level obtained after the preparation course by the different groups according to the strategy

	Group 1 (2021)	Group 2 (2022)	Group 3 (2023)
C1	3	1	2
B2	13	9	13
Population	16	10	15

The results of the three groups of teachers who completed the training course and took the official certification exam are shown in Table 2. Thus far, thirty-one teachers were certified. It's important to note that 9.7% obtained C1, while 77.4% obtained

B2. The rest of the teachers (12.9%) got B1. The last column on the right shows the percentages of B2 or above achieved in total by each group. It is noteworthy that all the candidates who took the exam achieved at least B1, and those with B1 got the A level, which is

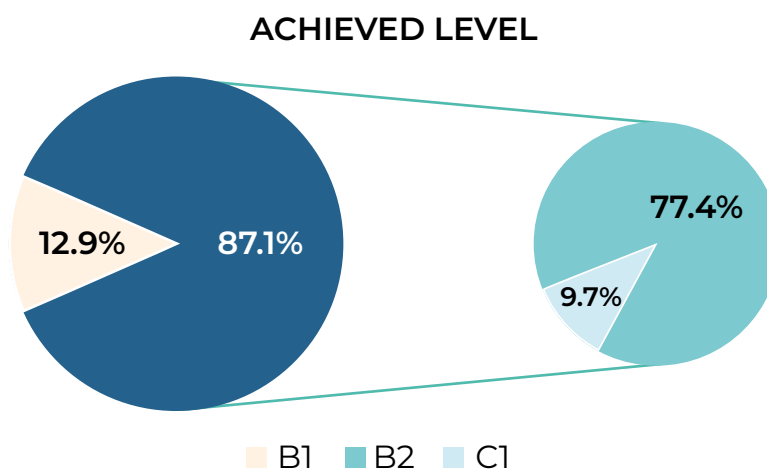
the closest level to B2. Moreover, some B2 were close to C1. The ratio of levels achieved by teachers across the three groups is shown in Figure 2. In this regard, it can be proved that the methodology achieved an

87.1% success rate in achieving its objective. In other words, we can say that 77.4% of the teachers obtained a B2 level while 9.7% achieved a C1 level (Figure 2).

Table 2
Cambridge First Certificate Exam (FCE) results

Group	Candidates who took the CFE	Candidates who achieved B1	Candidates who achieved B2	Candidates who achieved C1	%B2 or above
1 (2021)	16	3	13	0	81.3%
2 (2022)	9	1	6	2	88.8%
3 (2023)	6	0	5	1	100%
Total	31	4	24	3	87.1%
% of certification levels		12.9%	77.4%	9.7%	

Figure 2
Percentage of levels achieved by teachers after taking the Cambridge First Certificate Exam (FCE)



Note: Zoom on the right corresponds to B2 and C1.

Discussion

The effectiveness of the dissemination and socialization of the English engineering courses and the importance for the teachers to obtain their certification can be gauged by the number of the 31 participants in the three groups. The efficiency of the strategy can be appreciated by the ratio of trainees that got their certification referred to those who succeeded in the preparation course in terms of their potential to achieve the B2 level. The results of three groups or generations: 2021, 2022, and 2023 are presented in Table 2. The effectiveness was increased among the generations, and 87.1% of the candidates of the three generations obtained B2 or above. It was expected that all the candidates, according to their performance in the preparation course, could earn at least a B2. However, that did not happen until the third generation. According to these results, the certification course content seemed to be good enough for teachers to attain a high success rate in reaching at least the B2 level.

The last two sessions of the preparation course consisted of exams which certainly provided clues for estimating the success of the examinees. The first generation showed the greatest deviation from the prediction, but it was the first experience without feedback to ponder the performance under the conditions of the preparation course compared to the real exam. The preparation course attempted to replicate the challenge of the certification test in terms of knowledge and skills, even when there was some stress management because the exercises were rigorous in content and time as expected in the exam.

The results suggested that knowledge was better detected than current skills under pressure. For the first generation, a factor that might have affected the readiness perception is that the exam took place under the sanitary restrictions of COVID-19. The prediction of success got better in the following generations as the exam took place at the university. The results showed that the criteria for defining the level of success were tuned after the first experience.

Another aspect to highlight is that even though most of the candidates had previous experience with English, this may not be enough to get the target level in the certification exam, so the preparation course enforced their skills to succeed in both knowledge and abilities that the exam required.

Currently 31 teachers have their certification, which represents around 5% of the faculty. As international education programs consider English, more teachers will be recruited to take the training course and get the Cambridge Certificate.

If B2 is the benchmark to evaluate suitability, then 87.1% of achievement of the three generations could suggest that the proposed methodology was successful. The remaining teachers who did not achieve this goal were close to getting it, in some cases they were only one or two points away from qualifying for the B2 certification.

Moreover, it is common to rank the effectiveness of a strategy in education by surveying the trainees about the course. Often, they tend to answer based on how they felt rather than on the challenges and the achievements that courses imply. Although perception is important, in this case, the success of the strategy is objectively validated by the

high ratio of B2 achievement. Certified teachers have been enrolled in courses where content is taught in English.

Training for a certification like Cambridge FCE may seem to be a common goal for some institutions and people. There are plenty of courses offered by schools both presential and online or even by particulars. A remarkable fact in this strategy is that the trainees built up the necessary skills to answer the exam appropriately considering their knowledge of English, helpful tips given during the lessons, and the familiarization with the exam. This helped them not only to build linguistic skills but also to develop self-ground confidence making it possible to lower the affective filter when taking the certification exam and not being affected in a way that could influence in not getting the score required.

The decisions made in this strategy are thought to be correct considering the results achieved. It is known that the exam is described in the Cambridge official site, the material is available online, exercises can be found both in digital and printed form, but the strategy is an appropriate way to train professors who had certain level of English to level it up and reach the certification mostly in the target level.

Conclusions

Most of the professors who participated in the project (87.1 %) got a level B2 or higher. This supports the idea that besides the knowledge of the English language, it is particularly important to work on the skills for doing the certification exam and get used to conditions such as time restrictions and the stress

of being examined. Some people know or have some experience with English because they learned it by themselves, in academic institutions or even with private teachers, but they do not like to take exams or have never taken a certification test. The designed strategy considered the relevance of this matter, so during the sessions of the preparation course, the trainees worked on building the strategies to answer the exercises correctly always considering the time given for each section, leading them to have control on both aspects. As a result, when they took the exam, they were used to working in the types of exercises included but also in the established amount of time as it is required in the certification exam. The results show that the syllabus of the course, its development and duration are appropriate for attaining at least the B2 level of English defined by Cambridge (FCE).

The rate of candidates obtaining this certification objectively validates that the strategy of voluntary enrollment of teachers, detection of the level of English and the training preparation course were appropriate to the aims of the proposal of having Cambridge (FCE) certified faculty members. This fact will provide the institution with professors who master a second language and have a certification of English proficiency that is recognized worldwide which validates it. These professors will be able to participate in programs where the content of their subjects is taught in English to give students either an initial or complementary exposure to a sort of international experience.

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